Table of Contents

TCO99 Notice 1

FCC Statement Warning 2

Canadian DOC Notice 3

Precautions 3

Package Contents 4

Installation Instructions 4

- Assembling the Monitor 4
- Detaching the Monitor 4
- Adjusting the Viewing Angle 4
- Connecting the Devices 4
- Switching the Power 5

Adjusting Display Settings 5

- External Controls 5

OSD Options 5

- OSD Menu 6
  - Brightness & Contrast 6
  - Tracking 6
  - Position 6
  - Color 6
  - Language Setting 7
  - OSD Option 7
  - Auto Configuration 7
  - Information 7
  - Recall 7

General Specifications 8

Technical Information 8

- Pin Assignment 8
- Standard Timing Table 9
- Troubleshooting 10

Page1-2 stands for TCO'99 model only.
Please see back label for model distinction.

Congratulations!

You have just purchased a TCO'99 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, most of these potentially damaging substances sooner or later enter nature. There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of electricity generation have a negative effect on the environment (e.g. acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

What does labelling involve?

This product meets the requirements for the TCO'99 scheme, which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration). Approval requirements cover a wide range of issues: environment, ergonomics, usability, emission of electric and magnetic fields, energy consumption and electrical and fire safety. The environmental demands impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental policy which must be adhered to in each country where the company implements its operational policy. The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user. Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability. On the Back page of this folder, you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development

SE-114 94 Stockholm, Sweden Fax: +46 8 782 92 07 Email (Internet): development@tco.se Current information regarding TCO'99 approved and labeled products may also be obtained via the Internet, using the address*:*
http://www.tco-info.com/

Environmental Requirements

Flame Retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride, and those flame retardants are chemically related to another group of environmental toxins, PCBs. Both the flame retardants containing bromine or chloride and the PCBs are suspected of giving rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur. The elevant TCO'99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

Cadmium

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries, the color-generating layers of display screens and the electrical or electronics components must not contain any cadmium.

Mercury

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit.

CFCs (freons)

The relevant TCO'99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

*Lead***

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.

* Bio-accumulative is defined as substances which accumulate within living organisms

** Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.

FCC Statement Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

.Reorient or relocate the receiving antenna.

. Increase the separation between the equipment and the receiver.

. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

. Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the manufacturers may void the user's authority to operate this equipment.

WEEE Disposal Instructions

Do not throw this electronic device into the municipal trash bin when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it. For more information about the collection of WEEE welcome to visit our homepage at www.acer.com under environment.

Lamp Disposal

LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS. FOR MORE INFORMATION, CONTACT THE ELECTRONIC INDUSTRIES ALLIANCE AT WWW.ELAE.ORG. FOR LAMP SPECIFIC DISPOSAL INFORMATION CHECK WWW.LAAMPRECYCLE.ORG.

NOTE

A shielded-type signal cord is required in order to meet the FCC emission limits and also to prevent interference to the radio and television reception. It is essential that only the supplied signal cord be used.

Canadian DOC Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numerique de la classe B repecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

Preface

This manual is designed to assist users in setting up and using the LCD Monitor. Information in his document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic or other means, in any form, without prior written permission of the manufacturer.

Important Safety Instructions

Please read the following instructions carefully. This manual should be retained for future use.

1. To clean LCD Monitor screen;Power off LCD Monitor and unplug the AC Cord. Spray a non-solvent cleaning solution onto a rag and clean the screen gently.
2. Do not place the LCD Monitor near a window. Exposing the monitor to rain water, moisture or sunlight can severely damage it. ter, moisture or sunlight can severely damage it.
3. Do not place the LCD Monitor near a window. Exposing the monitor to rain water, moisture or sunlight can severely damage it. ter, moisture or sunlight can severely damage it.
4. Do not remove the cover or attempt to service this unit by yourself. Servicing of any nature should be performed by an authorized technician.
5. Operate LCD Monitor in a room with a room temperature of 5°C ~ 40°C (or 41°F ~ 104°F).Operating the LCD Monitor outside this range could result in permanent damage.
6. If any of the following occurs, immediately unplug your monitor and call an authorized technician.

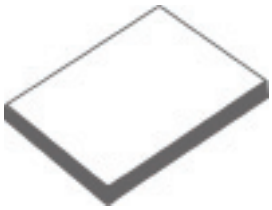
   * Monitor to PC signal cable is frayed or damaged.
   * Liquid spilled into LCD Monitor or the monitor has been exposed to rain.
   * LCD Monitor or the case is damaged.

Package Contents

LCD Monitor

Power Cord

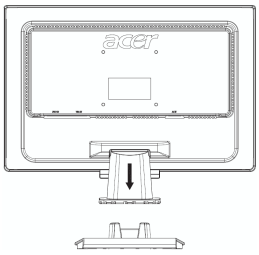
User Manual (CD)



Quick Start Guide

VGA Cable

Assembling the Monitor



1. Position the monitor on top of the stand.

2.Connect the stand into the neck of monitor along the track.

Detaching the Monitor

Important

First, find a clean, flat surface to place the monitor after removing it from the stand. Place a clean dry cloth under the monitor to protect it further. Pull the monitor slightly up and away from the stand.

Adjusting the Viewing Angle

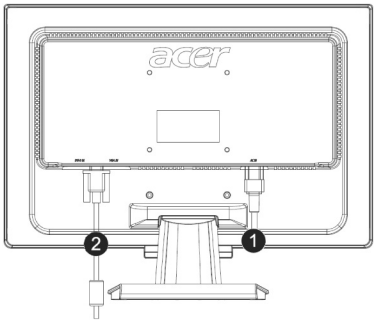
The viewing angle of the monitor ranges from forward 5° *to backward* 15°.

Caution:

Do not force the LCD Monitor over its maximum viewing angle settings as stated above. Attempting this will result in damaging the Monitor and Monitor stand.

Connecting the Devices

Please shut down the power of computer and monitor before you do the connection..

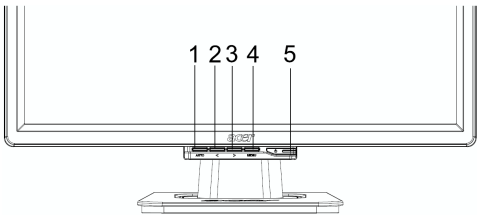


(1)	Power Cord	Attach the monitor to the power cord which should then be inserted into a properly grounded electric socket.
(2)	VGA Cable	Connect the signal cable to the VGA output socket of the graphics card on the computer. Then tighten the thumbscrews on the connector

WARNING: The D-Sub 15 pin plug of the VGA cable is trapezoid in shape. Make sure the shape of the plug matches the shape of the socket it is inserted into, and that none of the pins are bent or otherwise damaged.

Operating Your Monitor

First, switch the power on to the monitor, then switch the power on to the computer. When you see the LED on the power button go green, this indicates the computer is ready for use. Allow about 10 seconds for the video signal to appear. If you do not see the green light on the power button or a video signal, check the connections .



1	Auto	Auto Configuration	If OSD is active, press to exit. If OSD is inactive, press and the monitor will automatically optimize the display position, clock and phase of your display.
2	<	Minus	If OSD is active, press to select or adjust OSD options.
3	>	Plus	If OSD is active, press to select or adjust OSD options.
4	Menu	OSD Manual	Press to view OSD. Press again to exit.
5		Power	Power on/off Green: power on Orange: in sleep mode

OSD Options

Please refer to "External Controls " on Page 5. To adjust the OSD settings :
1. Press the MENU button to open the OSD menu
2. Use the buttons marked < or >, to highlight a control, then press the MENU button to enter
3. Use the buttons marked < or >, to adjust the control to the desired level.
4. When you have finished making all selections, press the MENU button to exit the OSD. (Or the adjustment will auto-save after 45 seconds.)

OSD Menu

Brightness & Contrast

BRIGHTNESS:
This adjusts the brightness of the picture on the screen.Adjustable range from the value of 0 to 100.

CONTRAST:
This adjusts dark and light shades of color relative to each other to achieve a comfortable contrast. Adjustablerange from the value of 0 to 100.

Tracking

FOCUS:
This removes any horizontal distortion and makes the picture clear and sharp.

CLOCK:
If there are any vertical stripes seen on the background of the screen this renders them less noticeable by minimizing their size. It also changes the size of horizontal screen.

Position

V-Position:
This removes any horizontal distortion and makes the picture clear and sharp.

H-Position:
This adjusts the horizontal.

Color Temperature

There are three ways of adjusting color temperature:

WARM:
Set the color temperature as CIE coordinate 6500°K.

COOL:
Set the color temperature as CIE coordinate 9300°K.

User defined:
You can adjust the colors red, green and blue to the intensity you desire.

Language

Select the OSD menu language from English, German, French, Traditional Chinese, Simplify Chinese, Japanese, Italian and Spanish.

OSD Position

This changes the position of the OSD window on the screen.
TIMEOUT function allow user define the OSD appearing period from 10 seconds to 120 seconds.

AUTO Configuration

Adjust the monitor parameter automatically.

Information

This shows brief information on the screen.

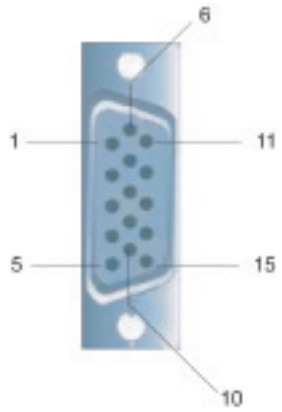
Recall

Recall to factory default settings

General Specification

Item	Specification
Display	20-inch Flat panel active-matrix TFT LCD
Max Resolution	1680 x 1050 @75Hz
Pixel Pitch	0.258 mm X 0.258 mm
Color	16.2M
Brightness	300nits (Typical)
Contrast Ratio	600:1 (Typical)
Response Time	8ms (Typical)
View Angle of Horizontal	140°
View Angle of Vertical	130°
Power Buttons	ON/ OFF
Control Buttons	Auto, MENU, <, >
Video In	Analog 0.7V
Sync	TTL (+/ -)
Plug & Play	DDC2B
EMI and Safety	UL(USA); CBC(B-Mark)(Poland); PSB(Singapore); TUV(Germany); CB: BSMI (Taiwan); CCC (China); PSE (Japan); FCC(USA); C-tick (Australia); CE(Europe); VCCI (Japan); TCO'99; ISO13406-2; TUV/GS; TUV/Ergo; WHQL(Microsoft)
Power Source	100~240V AC, 50/60 Hz
Power Consumption During Normal Operation	<65W
Power Consumption During Active off Operation	< 1W
Dimension (W_H_D)	476x384x184.6mm (base included)
Weight (Net/Gross)	5.5Kg/6.7Kg

Pin Assignment



Signal		Signal	
PIN	Description	PIN	Description
1	Red	9	+5V
2	Green	10	N.C.
3	Blue	11	N.C.
4	N.C.	12	DDC_SDA
5	GND	13	HSYNC
6	Red_GND	14	VSYNC.
7	Green_GND	15	DDC_SCL
8	Blue_GND		

Standard Timing Table

If the selected timing is NO T included in table below, this LCD monitor will go into the sleep mode.

VESA MODES							
			Horizontal		Vertical		
Mode	Resolution	Total	Nominal Frequency +/-0.5KHz	Sync Polarity	Nominal Frequency +/-1Hz	Sync Polarity	Nominal Pixel Clock (MHz)
VGA	640*480@60Hz	800*525	31.469	N	59.941	N	25.175
	640*480@72Hz	832*520	37.861	N	72.809	N	31.500
	640*480@75Hz	840*500	37.500	N	75.000	N	31.500
	640*480@85Hz	832*509	43.269	N	85.008	N	36.000
SVGA	800*600@56Hz	1024*625	35.156	P	56.250	P	36.000
	800*600@60Hz	1056*628	37.879	P	60.317	P	40.000
	800*600@72Hz	1040*666	48.077	P	72.188	P	50.000
	800*600@75Hz	1056*625	46.875	P	75.000	P	49.500
	800*600@85Hz	1048*631	53.674	P	85.061	P	56.250
XGA	1024*768@60Hz	1344*806	48.363	N	60.004	N	65.000
	1024*768@70Hz	1328*806	56.476	N	70.069	N	75.000
	1024*768@75Hz	1312*800	60.023	P	75.029	P	78.750
	1024*768@85Hz	1376*808	68.677	P	84.997	P	94.500
	1152*720@60Hz	1488*748	44.859	N	59.972	P	66.750
	1152*864@75Hz	1600*900	67.500	P	75.000	P	108.000
	1280*960@60Hz	1800*1000	60.000	P	60.000	P	108.000
SXGA	1280*1024@60Hz	1688*1066	63.981	P	60.020	P	108.000
	1280*1024@75Hz	1688*1066	79.976	P	75.025	P	135.000
UXGA	1600*1200@60Hz	2160*1250	75.000	P	60.000	P	162.000
WXGA	1360*768@60Hz	1792*795	47.712	P	60.015	P	85.5
WXGA+	1440*900@60Hz	1600*926	55.469	P	59.901	N	88.75
	1440*900@75Hz	1936*942	70.635	N	74.984	P	136.75
WSXGA+	1680*1050@60Hz	2240*1089	65.290	N	59.954	N	146.250
	1680*1050@75Hz	2272*1099	82.306	N	74.892	N	187.000

IBM MODES							
EGA	640*350@70Hz	800*449	31.469	P	70.087	N	25.175
	720x400@70Hz	900*449	31.469	N	70.087	P	28.322
MAC MODES							
VGA	640*480@66.7Hz	864*525	35.000	P	66.667	P	30.240
SVGA	832*624@75Hz	1152*667	49.725	N	74.550	N	57.283
XGA	1024*768@75Hz	1328*804	60.241	N	74.927	N	80.000
	1152*870@75Hz	1456*915	68.681	N	75.062	N	100.00
OTHER MODES							
XGA	1024*768@72Hz	1360* 800	57.669	N	72.086	N	78.434
SXGA	1280*1024@70Hz	1696*1072	74.882	P	69.853	P	127.000

Troubleshooting

This LCD Monitor has pre-adjusted using factory standard VGA timings. Due to the output timing differences among various VGA cards in the market, users may initially experience an unstable or unclear display whenever a new display mode or new VGA cardis selected.

Attention

This LCD Monitor Supports Multiple VGA Modes. Refer to the Standard Timing Table for a listing of modes supported by this LCD Monitor.

PROBLEM Picture is unclear and unstable

The picture is unclear and unstable, please perform the following steps :

1. Enter PC to "Shut Down Windows" status while you're in MS-Windows environment.
2. Check the screen to see if there's any black vertical stripes appear. If there are,take advantage of the "Clock" function in OSD menu and adjust (by increment or decrement numbers)until those bars disappear.
3. Move to "FOCUS" function in OSD menu again and adjust the monitor screen to its most clear display.
4. Click "No" on "Shut Down Windows" and back to the normal PC operating environment.

PROBLEM There is no picture on LCD Monitor

If there's no picture on the LCD Monitor, please perform the following steps:

1. Make sure the power indicator on the LCD Monitor is ON, all connections are secured,and the system is running on the correct timing. Refer to Chapter 3 for information on timing.
2. Turn off the LCD Monitor and then turn it back on again. If there is still no picture,press the Adjustment Control button several times.
3. If step 2 doesn't work, connect your PC system to another external CRT.If your PC system Functions properly with a CRT Monitor but it does not function with the LCD Monitor,the output timing of the VGA card may be out of the LCD's synchronous range.

   Please change to an alternative mode listed in the Standard Timing Table or replace the VGA card,and then repeat steps 1 and 2.

PROBLEM There is no picture on LCD Monitor

If you have chosen an output timing that is outside of the LCD Monitor's synchronous range (Horizontal: 31.5 ~ 84 KHz and Vertical:56 ~ 86 Hz), the OSD will display a "Out of Range" message. Choose a mode that is supported by your LCD Monitor. Also, if the signal cable is not connected to LCD monitor at all or properly, the monitor screen will displaya message "No Input Signal".

Caution: Do not attempt to service the monitor yourself or open the computer yourself.

Please refer all servicing to qualified service personnel if the problems cannot be solved in "Troubleshooting" section.